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**United States Patent** [19]  
**Kirkland****[11] Patent Number: 5,770,181**  
**[45] Date of Patent: Jun. 23, 1998****[54] COMPOSITION AND METHOD FOR  
DELIVERING ACTIVE AGENTS****[75] Inventor: W. Dean Kirkland**, El Cajon, Calif.**[73] Assignee: Alliance Pharmaceutical Corp.**, San Diego, Calif.0401377 12/1990 European Pat. Off. .  
9103267 3/1991 European Pat. Off. .  
2804234 8/1978 Germany .  
9001901 3/1990 WIPO .  
9014846 12/1990 WIPO .**[21] Appl. No.: 481,057****[22] Filed: Jun. 7, 1995****Related U.S. Application Data****[63]** Continuation of Ser. No. 685,211, Apr. 12, 1991, Pat. No. 5,496,535.**[51] Int. Cl.<sup>6</sup> ..... A61K 49/04****[52] U.S. Cl. .... 424/9.37; 424/9.4; 424/44;  
128/653.4****[58] Field of Search ..... 424/9.3, 9.4, 9.37,  
424/44****[56] References Cited****U.S. PATENT DOCUMENTS**3,975,512 8/1976 Long .  
4,074,709 2/1978 Kaplan .  
4,120,946 10/1978 Queuille et al. .  
4,215,103 7/1980 Millington .  
4,927,624 5/1990 Bryant et al. .  
4,971,785 11/1990 Wilson et al. .  
4,994,258 2/1991 Burns et al. .  
5,156,842 10/1992 Mulligan ..... 424/195.1**FOREIGN PATENT DOCUMENTS**

0118281 9/1984 European Pat. Off. .

**OTHER PUBLICATIONS**

File Server Derwent, File WPI, Abstract No. 76-58263X, &amp; JP,A, 50027399 (Miyata Ind KK) 20 Mar. 1975, see abstract.

File Server Derwent, File WPI, Abstract No. 71-01668s, &amp; US, A, 3553127 (Ansul Co.) 5 Jan. 1971, see abstract.

SMRI Brochure from 9th annual meeting, Apr. 13-17, 1991.

*Primary Examiner*—Brian M. Burn*Attorney, Agent, or Firm*—Knobbe, Martens, Olson & Bear, LLP**[57] ABSTRACT**

This invention relates to a non-aqueous fluorocarbon composition for use in magnetic resonance imaging (MRI) or radiographic imaging (X-ray or computed tomography), particularly imaging of the gastrointestinal (GI) tract; an improved fluorocarbon composition with enhanced contrast effects in the GI tract; a fluorocarbon composition having improved palatability; a fluorocarbon composition for delivering drugs or bioactive agents; improved preparations for radiographic imaging or MRI; methods for producing and using such preparations; methods for improving the palatability of non-aqueous liquids; and methods for improving imaging.

**33 Claims, No Drawings**